

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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History of Branch No. 1, NII 88, Ostashkov

1. [redacted] Ostashkov, a square building complex was erected in 1926 - 1928 on Gorodomlya Island to be used as a veterinary biology experimental station under the auspices of the Soviet Academy of Sciences. The installation consisted of laboratories, offices, libraries, stables, and a gas chamber for animals. Ten two-story residential buildings, each with twelve 2 - 3-room apartments, the power station, forge, baths, and clubhouse comprised what the local population referred to as the "institute".
2. During World War II and the advance of German troops to the west side of Lake Seliger, the entire institute was shifted to another location, and the institute buildings were converted into a Soviet field hospital. After the war the field station was dissolved and the buildings left unattended.
3. [redacted] in November 1946, the installation was in an utterly neglected condition, and obviously the local population had been pilfering. Roofs were leaking, walls had collapsed, and window panes were missing. A penal colony of Soviet soldiers, together with a few workmen from nearby areas, began general repair work. The lack of provisions such as food, clothing, and medical care [redacted] was appalling. There was no organization [redacted] It

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- 2 -

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4. [redacted] assigned in October 1946 to Branch 1 of Plant 88 were composed of personnel from a) Bleicherode, b) GEMA, Berlin, c) various universities of the Soviet Zone of Germany. The Bleicherode group was originally founded in July 1945 by Dr. GEHRMANN under the name "Institute Raabe". This group reconstructed the A-4 (V-2) rocket for the Soviets. Because most experienced rocket experts from Peenemuende had fled to the West after the collapse of Germany, Dr. GEHRMANN, an ex-Peenemuende man, was compelled to recruit new personnel whose professional background, he reasoned, afforded the possibility of acquainting them with rocket work, previously unknown to them.

5. When GROETTRUP began his activities for the Soviets toward the end of 1945, he considered the small group at Institute Raabe inadequate for his elaborate plans and founded, with Soviet approval, the so-called "Mittelwerke", which he intended to expand into another Peenemuende. He increased the Raabe group by hiring designers, engineers, and technicians from former German aircraft plants such as Junkers, Henschel, and Arado and intended to train them for rocket work. Therefore, only 17 men of the entire Bleicherode group had experience with rocket missiles gained at Peenemuende. From GEMA, Berlin, only Hans GASCH, a metallographic expert [redacted] had formerly been associated with Peenemuende. All others [redacted] had no previous rocket experience. None of the deportees of the third group from East German universities had previously worked with rockets, nor had they ever been in Peenemuende. This assembly of personnel with greatly varying professional backgrounds, totaling about 170, was selected by the Soviets for deportation to the USSR.

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6. [redacted] About 100 men were assigned to Plant 88, Podlipki, and the remaining 70 specialists to Branch 1, Ostashkov. Administratively all were attached to the Soviet Ministry of Armaments. Professor Walter PAUER from the Technical High School at Dresden was assigned alone to a rocket group of the Soviet Communications Ministry in Bolshevo near Podlipki, but was transferred, upon his request, to Branch 1 in March 1947.

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7. After the most necessary repair work on several buildings had been completed, temporary working space was assigned [redacted] The Soviets appointed AGAPONOV administrative director of the island, and the Soviet engineer BOSH-KOTSYUBINSKIY, [redacted] connected with the Soviet Military Academy, as scientific and technical supervisor. The latter [redacted] was highly intelligent, and spoke fluent German and English.

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8. [redacted] work was to begin in December 1946. No directives were received, nor did they indicate what they were interested in; there was no attempt on their part to organize [redacted] groups. A meeting of Germans [redacted] established an organizational framework and the formation of homogeneous work groups. It was decided to prepare various fundamental reports, based on [redacted] experiences, which could later serve as reference material. BOSH-KOTSYUBINSKIY [redacted]

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[redacted] requested to be briefed on technical questions pertaining to rocket development, suggested [redacted] drawings and texts, and sought thereby to acquaint himself with rocket science, heretofore unknown to him.

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25X1

- 3 -

Work of Podlipki Group

9. While the island of Gorodomlya was hibernating in the winter of 1946-1947, GROETTRUP, together with a small group, worked in Podlipki on an over-all organization plan of the entire German collective. The Podlipki group during this time had been equally unproductive and spent their time with self-assigned jobs without Soviet interference. Only the Building Section was preparing plans for future research and development facilities. In addition to working on the organizational plan, GROETTRUP wrote numerous "propaganda reports" in which he sought to convince the Soviets of his great capabilities and to induce them to grant him permission to create a vast institution with over 1000 workers, for the production of rocket weapons. These reports of GROETTRUP bordered on the fantastic. It may characterize Soviet mentality and their seemingly unlimited confidence in the abilities of German rocket specialists that the Soviets accepted these insane reports as feasible and subsequently entrusted GROETTRUP with the leadership of the German collective.
10. To illustrate GROETTRUP'S attempts to sell himself to the Soviets [redacted]

[redacted] He indicated on world maps where and in what time his planned rockets would fly, and what the moral effects would be on [redacted] people if his rockets fell upon [redacted] cities. He even calculated the postal fees for rocket letters to be delivered anywhere in the Soviet Union etc.

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Organization of German Group

11. In May 1947, after completion of buildings, housing laboratories, design offices, and workshops, the work began at Podlipki and Ostashkov. GROETTRUP's Soviet-approved organization was as follows:
- a. Group "L-1" (Podlipki) and "L-2" (Ostashkov) chief: GROETTRUP (Comment: This group consisted of APEL, JASPER, JAFFKE, Dr. Rolf COERMANN (not to be confused with GEHRMANN), and GROETTRUP. It served as management group only to the entire German collective. Group "L-1" was reorganized in May 1947. At this time APEL, JASPER, JAFFKE, and Dr. COERMANN resigned to take over assignments as sector chiefs or laboratory chiefs. GROETTRUP alone remained chief of "L-1" at Podlipki, and appointed Engineer KIRCHER to act as deputy of "L-2".

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25X1

- 4 -

at Branch 1, in Ostashkov, and the "L" designation indicated administrative offices only. With the dismissal of GROETTRUP in 1950, groups "L-1" and "L-2" were dissolved.)

- b. Sector 1 (Ballistics) Chief: Dr. Waldemar WOLFF
- c. Sector 2 (Aerodynamic) Chief: Dr. Werner ALBRING
- d. Sector 3 (Propulsion) Chief: Dr. Karl UMPFENBACH
- e. Sector 4 (Controls) Chief: Dr. Werner HOCH
- f. Sector 5 (Design) Chief: Dipl. Ing. Josef BLASS
- g. Sector 6 (Physics) Chief: Professor Wilhelm SCHUETZ
- h. Sector 7 (Chemical) Chief: Dr. Franz MATTHES
- i. Sector 9 (Workshop) Chief: APEL
- j. Sector 10 (Static) Chief: Dipl. Ing. Rudolf MUELLER
- k. Sector 11 (Buildings) Chief: Heinz JAFFKE

Although all chiefs were at Ostashkov, the main components of sectors 3, 4, 9, and 11 worked in Podlipki until 1948, when they were transferred to Ostashkov.

#### Projects G-2 and G-3

12. Sector 5 completed Project G-2 (Soviet designation R-11), originally started at the Mittelwerke in Bleicherode. (G-2 is basically an enlargement of the A-4 with enlarged fuel tanks and utilizing a higher chamber pressure. Its proposed thrust was 35 metric tons. Chamber pressure was to be about 25 atmospheres. This project advanced as far as technical drawings, but was never detailed for production. [redacted] Project G-3 (R-12) was begun in June 1947. At Podlipki a nitric-acid test stand for rocket motors of type "Wasserfall" was constructed by the Soviets.

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[redacted] The former Peenemuende Wasserfall test-stand specialist, Karl HARNISCH, was called upon for advice and assistance.

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13. In June 1947 GROETTRUP, together with Colonel POBEDONOSTSEY, arrived at Ostashkov to check on progress of the specialist group. POBEDONOSTSEV criticized GROETTRUP's project G-3 and considered his proposed method of thrust utter nonsense. Shortly after his return to Podlipki, POBEDONOSTSEV stepped down from his job as chief designer of Plant 88, but remained as scientific advisor to the Ministry of Armaments of the USSR. [redacted] that his resignation was based on differences of opinion with GROETTRUP was later verified [redacted] During this time the former director, AGAFONOV, was replaced by Fyodor Guylovich SUKHOMLINOV and a new chief engineer, KURGANOV, replaced BOSH-KOTSYUBINSKIY. The latter remained at Branch 1 for another year as assistant to KURGANOV and later as co-worker in Sector 10.

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#### PROJECTS ASSIGNED TO SECTORS

##### Increased Soviet Supervision

14. First act of the newly appointed KURGANOV was the introduction of "technical planning", customary in the USSR. This new epoch was accompanied by close guarding of the German collective, prohibition to leave

SECRET

SECRET

- 5 -

25X1

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Soviet employees were attached to all sectors previously composed only of Germans. A Soviet engineer was assigned to each sector and acted as deputy to the German sector chief.

#### Caliber of Soviet Engineers

15. These Soviet engineers, [redacted] were recent graduates from technical schools and were suspicious of anything they had not been taught at school. Their education was, [redacted] too specialized; a mathematician, for instance, knows the technique of the differential calculus but knows little of logarithms. This one-sided education was noticeable in all technical fields. 25X1
16. GROETTRUP, still in Podlipki, continued his work without Soviet interference. Technical drawings for Project G-3 (R-12) were concluded by Sector 5, which played a leading role at Ostashkov at this time. Ballistic, aerodynamic, thrust, and control problems for the G-3 had been time-consuming and kept the respective sectors busy. Next to Project G-3, work at Ostashkov included in 1947 the development of a mechanical-electrical computer (Bahnmodell) in Sector 4, a water channel in Sector 2, and several testing and measuring apparatus for the one-ton test stand. Chief Engineer KURGANOV's attitude to any of these projects was indifferent. Toward the end of 1947, laboratories of sectors 4 and 7 were completed. Ninety per cent of the equipment was [redacted] with five per cent procured from East German production and another five per cent of Soviet origin. There was a shortage of materials such as screws, wire, chemicals, etc., and much valuable time was lost by [redacted] had to make them manually. Completion of the first mechanical-electrical computer by Sector 4 caused a mild sensation among higher Soviets in various ministries, who intended to buy a number of these computers. This aroused an immediate "economic" interest among the Soviet management of Branch 1. In spring of 1948, Sector 4 was greatly enlarged and the prestige of Sector Chief Dr. HOCH, perhaps the most talented of the German specialists, increased among the Soviets. 25X1
17. In May 1948, GROETTRUP was assigned permanently to Ostashkov. His Soviet deputy was engineer KISELEV, who acted at the same time as deputy to Chief Engineer KURGANOV. In June 1948, work started on GROETTRUP's Project G-4 (R-13). More Soviets, receiving their orders directly from KISELEV or KURGANOV, were assigned to the various sectors. 25X1
18. For further training of these young Soviet engineers, again recent graduates, classes were started by KURGANOV in which German specialists served as teachers. Subjects taught were not in the rocket field but covered general scientific problems fitting the students' specialty. [redacted] Participation in these lectures was compulsory for the Soviets and strictly enforced. By the fall of 1948 approximately 20% of the personnel in each sector were Soviets; in Sector 9 their numbers had increased to 50%. Soviet infiltration of all departments was smooth and progressive. The professional skills of Soviet welders, mechanics, electrotechnicians, etc., were extraordinarily bad, and German mechanics were ordered to instruct them. [redacted] the Soviets intentionally dispatched unskilled personnel to the installation for training purposes. 25X1

#### R-14 Project

19. In October 1948 work started on the one-ton test stand and the wind tunnel. Sector 4 developed an improved mechanical-electrical computer and worked on other measuring and testing apparatus. Sector 7 was building a fuel

SECRET

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-6-

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test stand. A technical library came into existence, containing older German publications and more modern and up-to-date technical and scientific periodicals. With the conclusion of Project G-4 in December 1948, the sector chiefs for design, controls, statics, propulsion, ballistics, and aerodynamics were ordered to a meeting in Podlipki. They returned to Ostashkov with an order from General GONOR to begin work on the R-14, a Soviet-proposed missile with a range of 3000 km. GROETTRUP was entrusted with the development of this project and given six months' time to complete the preliminary designs. A decided increase of tension developed between GROETTRUP and Dr. HOCH during this time. Dr. HOCH openly called GROETTRUP a charlatan and bitterly resented his irresponsibility for acceptance of GONOR's proposal. He was supported in his accusations by the majority of the German collective, who were equally aware of the absurdity of this project. KURGANOV's views coincided with Dr. HOCH's.

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20. In June 1949, a new Soviet regulation forbade Soviets to maintain social relationships with Germans; violators were threatened with immediate dismissal and severe punishment. Inspection trips by higher Soviets from Plant 88 increased. Project R-14 was severely criticized by them but was neither stopped nor modified.

#### Expansion of Sector 4

21. Soviet interest in the summer of 1949 concentrated on control projects of Sector 4. Personnel from other sectors, including the entire Sector 6, was transferred to Sector 4, which also received preferential treatment with regard to supplies. Its chief, Dr. HOCH, considered the time opportune to attempt earnestly the removal of GROETTRUP. Stimulated by HOCH, KURGANOV composed a memorandum to the Ministry of Armaments of the USSR, in which he complained about GROETTRUP's concepts and plans of Project R-14. In December of 1949, the technical drawings for R-14 were examined by a Soviet commission consisting of representatives of the Ministry for Radio Technique (sic), persons from the Ministry of Armaments, and high members of Plant 88. Their findings were that Dr. HOCH's concepts and designs of radio-control guidance (Funksteuerung) for R-14 were excellent. Other findings of this commission were not reported at this time. As an aftermath to this meeting, Dr. HOCH's Sector 4 was enlarged a third time and subsequently became the largest sector on the island.
22. Work completed in 1949 included the 20-kg test stand of Sector 7, the one-ton test stand of Sector 3, and the wind tunnel of Sector 2. All were in operation. Construction of new buildings for Sector 9 began, and a galvanizing and plating workshop was established. Laboratory equipment arrived in larger quantities; most of it was of recent Soviet make and marked "built in 1949". Much of this equipment had to be worked over because of systemic errors or defects and faulty assembly. Many 60-milliamperemeters of type PM 70, for example, contained the necessary damping magnet but lacked the aluminum damping disc. Delivery of such carelessly assembled equipment, often not working, was not at all exceptional. Assortments of instruments and chemicals increased and were more readily available. Delivery and supplies of wire, bolts, nuts, screws, etc., still remained inadequate.

#### Reorganization of Personnel at Podlipki and Ostashkov

23. In the spring of 1950 a general purge began, affecting Soviet and German personnel in Podlipki and Ostashkov. this action was evoked by KURGANOV's memorandum to the ministry. Dismissed were Generals GONOR, SPIRIDONOV, and Colonel UMANSKIY, along with many Soviet department chiefs and their deputies.

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-7-

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USTINOV remained in his position. The Soviet, VASILYEV, from the Ministry of Armaments, was appointed director of Plant 88. KURGANOV was transferred to Podlipki and promoted to chief engineer, a post until then held by General SPIRIDONOV. GROETTRUP was dismissed in May 1950, his group "L" was dissolved, and with a vast reduction in salary he was transferred to Sector 1. His secretaries Ursula SCHAEFER and Lucie LEUMANN were placed directly under the Soviet Department 1. Dr. HOCH, keeping his position as chief of Sector 4, was appointed successor to GROETTRUP. HOCH's Soviet deputy, VASILYEV, was advanced to chief engineer of Branch 1. With Dr. HOCH and VASILYEV in command at Branch 1, Sector 4 gained further in importance.

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#### Soviets Assume Control

24. The change in management at Plant 88 and Branch 1 reflected totally different Soviet attitudes. Work assignments for each sector were now by Soviets. These orders were clearly defined. Frequent checks took place by Soviet curators, all members of the Soviet Ministry of Armaments who possessed a high degree of know-how. Project R-113, an anti-aircraft rocket, was initiated. Germans were called upon to contribute only to problems relating to controls, ballistics, and aerodynamics. Design and propulsion problems the Soviets retained for themselves. The phase of letting Germans handle the entire project was clearly over. Experiments with exhaust-gas turbines of Sector 3 continued but served mainly to instruct Soviet crews under engineer IOFFE how to operate the one-ton test stand. Assignments by the Soviets for tests in the wind tunnel, water channel, and 20-kg test stand were formulated in such a manner that it was impossible to determine for which purpose or missile they could serve. Concealment of purpose of such experiments was possible, because they were carried out with small testing apparatus and results achieved could easily be transcribed to the original missile. Soviets attached to each sector as deputies to the German chiefs gradually reversed this status until the Germans were mere order-takers.
25. In the fall of 1950 the control problems for Project R-113 were solved by Dr. HOCH and examined by a Soviet commission consisting of members of various ministries. Subsequently Dr. HOCH was invited or compelled to sign, together with Dr. Felix STOLPE, Engineer Gustav BLASIG, Engineer Albrecht TOEPFER, Engineer WOLTER, and Engineer VILTER, another four-year contract and was shortly thereafter transferred to Moscow. Combined with Dr. BUSCHBECK and Graduate Engineer EITZENBERGER from the Monino group, they continued to work on control problems. This entire group is still in the USSR,
26. Dr. Waldemar WOLFF was appointed to head the German collective. His position was insignificant. The technical leadership of the German collective group was now firmly in the hands of Chief Engineer VASILYEV.

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#### Planned Expansion of Research Facilities

27. During the winter of 1950 large numbers of Soviet-manufactured drilling machines and lathes of different sizes arrived at the island for installation in Sector 9. Workshop (Tsakh) 12 was established, employing exclusively Soviet personnel. Plans for 1951 included additional expansions of all workshops, offering facilities to pursue research and experiments far beyond the present stage.
28. After HOCH's transfer to Moscow, the Control Sector was managed by Engineer PREIKSCHAT, who proved unable to measure up to this task. In the spring of 1951, after he completed a costly but fully inapplicable radio-control

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-8-

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guidance project, section "radio control" of Sector 4 was taken over by the very capable, [redacted] Soviet engineer, FOMIN. In collaboration with Professor Theodor SCHMIDT and Dr. MOLLWO, he developed short-wave transmitters and receivers (less than 30 cm). Gradually, newly arriving Soviet engineers replaced all German specialists, and in August 1951 FOMIN was able to continue entirely without German help. In June 1951 Soviet crews had become thoroughly familiar with the operation of the one-ton test stand, and further participation of Germans was prohibited. Other sectors followed suit and excluded all Germans. Many specialists, now surplus personnel, were assembled in Sector 9 and worked on smaller gauges and measuring apparatus not connected anymore with rocket development.

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29. The chief Soviet interest, as far as the German contribution was concerned, concentrated on development of multiple-component scales, tank-volume gauges, vibration-test apparatus (Schuetteltisch), and rapid chemical analysis methods.
30. In October 1951, all participation of German specialists on work labeled "secret" was stopped upon orders from the ministry. Compliance with this order was carried out by representatives of Plant 88. Sector 1 was dissolved; sectors 2 and 7 were compelled to conclude training of Soviet crews on the 20-kg test stand, water channel, and wind tunnel. Work on mechanical-electrical computers, certain types of measuring apparatus, and on rapid chemical analysis methods continued a few months longer to allow the Soviets to acquire additionally needed skills. Experiments by the Soviets continued on the one-ton test stand, water channel, and wind tunnel, but under careful concealment of aim or purpose. [redacted] Sector 11 was detailed to prepare plans for new housing projects. Construction work on the enlargement of workshops was intensified. All unfinished laboratory work had to be finished by May 1952. Beginning in June all work had been terminated by the specialists, and the Soviets took over completely. [redacted]

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31. [redacted] SUKHOMLINOV had been replaced as director of Branch 1. [redacted] the remaining 24 specialists at Ostashkov, irrespective of sector they had been associated with, were combined into a new, unnamed section under JASPER. They have no specific assignments; their work is not connected with rocket research and is seemingly insignificant. All are prohibited from entering the main buildings of the institution.

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#### Evaluation of Work Conducted at Podlipki and Ostashkov

32. On the basis of [redacted] observations made in the USSR, [redacted]
- a. The Soviets had no personnel in Podlipki or Ostashkov knowledgeable in the rocket field. [redacted]
- b. The German collective group did not contain experienced men in the fields of propulsion, design, and aerodynamics. The Soviets nevertheless permitted the collective to develop general rocket projects, thereby overestimating the abilities of the collective and its leadership.
- c. Work performed [redacted] could have been accomplished in six months, under competent leadership.

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- 9 -

- d. Projects G-2 through G-4 (R-11 - R-13) and Project R-14 were of no value to the Soviets, with the exception of by-products.
- e. The entire program was severely handicapped by lack of instruments and equipment, as well as false employment practices.
- f. Based on the assumption that the Soviets had no other rocket development institute, the contribution of the German collective during 1946-1952 can be compared with the stage of development reached by Germany in 1945, as follows:
  - (1) Radio Guidance: Stage reached by Germans in Peenemuende was equalled or passed in perhaps 6 months.
  - (2) Ballistics, Aerodynamics and Design: Did not go beyond German developments of 1945.
  - (3) Propulsion and Ground Installations: Behind stages reached in Germany.
  - (4) Testing and Laboratory Apparatus: Accomplishments can be considered important for Soviets. Considerable progress was reached, compared to developments in Germany. Examples: Multiple-component scales for wind tunnel, measuring apparatus for short-wave-length research (less than 30 cm), measuring apparatus for test stands.
- g. The Soviets, after departure of the German collective, were in possession of a research station and trained personnel capable of continuing rocket and allied research. [redacted] the Soviets are able to undertake, without outside help, the following:
  - (1) Water-channel and wind-tunnel research
  - (2) Radio-control guidance research
  - (3) Fuel research, including burning tests
  - (4) Solve fuel-injection problems
  - (5) Burning experiments with rocket ovens up to 1-metric-ton thrust
  - (6) Testing of mechanical controls (Rudermaschinen)
  - (7) Material-testing of metals
  - (8) Design and assembly of research and testing apparatus necessary for experiments 1 through 7
  - (9) Calibration and repair of electrical and mechanical instruments.

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#### Future of Ostashkov Installation

53. Although nothing could be learned about future Soviet intentions [redacted] intense building activities and deliveries of new and large workshop machines indicate Soviet plans to expand the institution. [redacted] the geographic location of the installation does not lend itself for a production site. Lake Seliger is impassable during each winter for about four months for ships and trucks, thereby rendering the transport of materials almost impossible. [redacted] the island installation will primarily serve as a development and experimental station.

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